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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/594,083	06/15/2000	Max Copperman	07569-0013	8577

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EXAMINER
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AL HASHEMI, SANA A

ART UNIT	PAPER NUMBER
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2171

DATE MAILED: 10/31/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/594,083

Applicant(s)

COPPERMAN ET AL.

Examiner

Sana Al-Hashemi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 19-97 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

0804

**DETAILED ACTION**

***DETAILED ACTION***

***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-18, drawn to knowledge map representation, classified in class 707, subclass 500.
- II. Claims 19-33, 85, drawn to knowledge container indicator, classified in class 707, subclass 104.1.
- III. Claim 34, drawn to process of using a tag to generate a summary of knowledge containers method, classified in class 707, subclass 102,
- IV. Claims 35-40, drawn to autocontextualization method, classified in class 707, subclass 103R.
- V. Claims 41-43, drawn to organization of contiguous entities, classified in class 707, subclass 500.
- VI. Claims 44-83, drawn to a query to identify a knowledge container method, classified in class 707, subclass 3.

- VII. Claims 84, and 86, drawn to a method of identify in a knowledge container associated with a knowledge map, classified in class 707, subclass 5.
- VIII. Claims 87-92, drawn to a method of constructing a knowledge map from corpus of knowledge containers, classified in class 707, subclass 513.
- IX. Claims 93-97, drawn to a method of building a hierarchy of knowledge map from plurality of knowledge containers, classified in class 707, subclass 7.

Inventions I – IX, are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, the combination (I) as claimed does not require any particular one of the subcombination II – IX as claimed, because it is a knowledge map presentation method that does not require any one of the subcombinations.

The subcombinations II –IX have separate utility such as knowledge containers, knowledge container indicator, generating a summary sing a natural language template, autocontextualzation to automatically associates a knowledge container to a knowledge map, organizing the knowledge entities, querying to identify a knowledge container, construct a knowledge map from corpus of knowledge containers, or build a hierarchy of knowledge map from plurality of knowledge containers Therefore, the inventions are distinct; however, they could be usable together.

The sub-combination (II) as claimed does not require any particular one of the subcombination I, III – IX as claimed, because it is a knowledge container with an object indication with a tag that is associated to the object. The subcombinations I, III –IX have separate utility such as knowledge map representation, process of using a tag to generate a

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summary of knowledge container indicator, generating a summary sing a natural language template, autocontextualzation to automatically associates a knowledge container to a knowledge map, organizing the knowledge entities, querying to identify a knowledge container, construct a knowledge map from corpus of knowledge containers, or build a hierarchy of knowledge map from plurality of knowledge containers.

The sub-combination (III) as claimed does not require any particular one of the sub-combination I, II, and IV – IX as claimed, because it is a knowledge map presentation method that does not require any one of the sub-combinations. The sub-combinations I, II –IX have separate utility such as knowledge map representation, knowledge container indicator, generating a summary sing a natural language template, autocontextualization to automatically associates a knowledge container to a knowledge map, organizing the knowledge entities, querying to identify a knowledge container, construct a knowledge map from corpus of knowledge containers, or build a hierarchy of knowledge map from plurality of knowledge containers. Therefore, the inventions are distinct; however, they could be usable together.

The sub-combination (IV) as claimed does not require any particular one of the subcombination I - III and V – IX as claimed, because it is autocontextualization method to automatically associate knowledge container with a knowledge map. The subcombinations I, II and IV –IX have separate utility such as knowledge map representation, knowledge container indicator, organizing the knowledge entities, querying to identify a knowledge container, construct a knowledge map from corpus of knowledge containers, or build a hierarchy of knowledge map from plurality of knowledge containers.

The sub-combination (V) as claimed does not require any particular one of the subcombination I - IV, VI – IX as claimed, because it is a method organization of contiguous

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entities. The subcombinations I – IV, VI –IX have separate utility such as knowledge map representation, knowledge container indicator, generating a summary using a natural language template, autocontextualization to automatically associates a knowledge container to a knowledge map, querying to identify a knowledge container, construct a knowledge map from corpus of knowledge containers, or build a hierarchy of knowledge map from plurality of knowledge containers.

The sub-combination (VI) as claimed does not require any particular one of the subcombination I - V, VII – IX as claimed, because it is a method of identify in a knowledge container associated with a knowledge map. The subcombinations I – IV, VI –IX have separate utility such as knowledge map representation, knowledge container indicator, generating a summary using a natural language template, autocontextualization to automatically associates a knowledge container to a knowledge map, organizing the knowledge entities, querying to identify a knowledge container, construct a knowledge map from corpus of knowledge containers, or build a hierarchy of knowledge map from plurality of knowledge containers.

The sub-combination (VII) as claimed does not require any particular one of the subcombination I-VI and VII – IX as claimed, because it is a method of identify in a knowledge container associated with a knowledge map. The subcombinations I, III –IX have separate utility such as knowledge map representation, knowledge container indicator, generating a summary using a natural language template, autocontextualization to automatically associates a knowledge container to a knowledge map, organizing the knowledge entities, querying to identify a knowledge container, construct a knowledge map from corpus of knowledge containers, or build a hierarchy of knowledge map from plurality of knowledge containers.

The sub-combination (VIII) as claimed does not require any particular one of the subcombination I – VII and IX as claimed, because it is a method of constructing a knowledge map from corpus of knowledge containers. The subcombinations I, III –IX have separate utility such as knowledge map representation, knowledge container indicator, generating a summary sing a natural language template, autocontextualzation to automatically associates a knowledge container to a knowledge map, organizing the knowledge entities, querying to identify a knowledge container, or build a hierarchy of knowledge map from plurality of knowledge containers.

The sub-combination (IX) as claimed does not require any particular one of the subcombination I, III – IX as claimed, because it is a method of building a hierarchy of knowledge map from plurality of knowledge containers. The subcombinations I, III –IX have separate utility such as knowledge map representation, knowledge container indicator, generating a summary sing a natural language template, autocontextualzation to automatically associates a knowledge container to a knowledge map, organizing the knowledge entities, querying to identify a knowledge container, construct a knowledge map from corpus of knowledge containers.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

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Because these inventions are distinct for the reasons given above and the search required for one group is not required for the other groups, restriction for examination purposes as indicated is proper.

During a telephone conversation with Tom Brennan on 10/24/02 a provisional election was made without traverse to prosecute the invention of I, claims 1-18. Affirmation of this election must be made by applicant in replying to this Office action. Claims 19-97 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected inventions.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-18 are rejected under 35 U.S.C. 102 (e) as being anticipated by Agrawal et al. (US Patent No. 6,233,575).



1. Regarding Claim 1, Agrawal discloses a knowledge map representation of selected discrete perspectives of a domain of knowledge, said knowledge map useable by a knowledge instance classification computer program to classify instances of knowledge according to said discrete perspectives, said representation comprising (see column 7, lines 49-57, Agrawal):

a plurality of separate taxonomies, each separate taxonomy representing one of said discrete perspectives of the knowledge domain(see column 4, lines 37-42, Agrawal);

wherein each taxonomy is organized as a graph of nodes, connected by edges, each node of said graph corresponding to a conceptual area within the discrete perspective that the taxonomy represents and each edge of said graph representing a parent-child relationship between the conceptual areas to which the nodes connected to that edge correspond (see column 9, lines 50-57, Agrawal<sup>1</sup>).

2. Regarding Claims 2, and 3, Agrawal discloses a knowledge map wherein said graph is a directed acyclic graph or a hierarchical graph (see column 9, lines 54-57, Agrawal).

3. Regarding Claim 4, Agrawal discloses a knowledge map representation further comprising at least one knowledge instance associated with at least one node of said taxonomies (see column 9, lines 60-64, Agrawal);

whereby the at least one association is a classification of the knowledge instance within the knowledge domain (see column 9, lines 65-67, Agrawal).

4. Regarding Claim 5, Agrawal discloses a knowledge map representation wherein each of said taxonomies is one of:

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<sup>1</sup> The hierarchy structure corresponds to the parent-child relationship.

a topic taxonomy, in which each node of the topic taxonomy represents one or more topics and the association of a knowledge container with a node of said topic taxonomy indicates that the content of the knowledge container is about the topic represented by that node (see column 10, lines 1-11, Agrawal<sup>2</sup>);

a filter taxonomy, in which each node of the filter taxonomy represents meta-data which are characteristics of knowledge containers that cannot be readily derived from the content of the knowledge container and the association of a knowledge container with a node of said filter taxonomy indicates that the knowledge container has the characteristic represented by that node (see column 10, lines 12-22, Agrawal);

a lexical taxonomy, in which each node of the lexical taxonomy represents concepts in the knowledge domain that are identifiable by one or more specific words or phrases and the association of a knowledge container with a node of said lexical taxonomy indicates that the knowledge container has one or more instances of the words or phrases indicative of the concept represented by that node (see column 10, lines 47-56, Agrawal).

5. Regarding Claim 6, Agrawal discloses a knowledge map representation wherein each of said taxonomies is one of:

a process taxonomy, in which each node of the process taxonomy represents a step in one or more business processes and the association of a knowledge container with a node of said process taxonomy indicates that the content of the knowledge container is pertinent to the step represented by the node (see column 10, lines 59-64, Agrawal);

an environment taxonomy, in which each node of the environment taxonomy represents at least one entity (see column 10, lines 65-66, Agrawal);

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<sup>2</sup> The terminal or leaf node corresponds to knowledge container.

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a diagnostic taxonomy, in which each node of the diagnostic taxonomy represents at least one symptom of a problem and the association of a knowledge container with a node of said diagnostic taxonomy indicates that the content of the knowledge container describes a method to address that symptom (see column 2, lines 32-44, Agrawal);

a human characteristics taxonomy, in which each node of the human characteristics taxonomy represents attributes (e.g., address, height, weight, etc.), and the association of a knowledge container with a node of the human characteristics taxonomy indicates that the content of the knowledge container concerns the attribute represented by the node (see column 6, lines 35-39, Agrawal);

an entitlement taxonomy, in which each node of the entitlement taxonomy represents an access control level of permission for viewing the content or accessing the resources of knowledge containers and the association of a knowledge container with a node of said entitlement taxonomy indicates that the knowledge container is to have the access control level specified by that node (see column 9, lines 35-49, Agrawal); or

a standard taxonomy, in which each node of the standard taxonomy represents topics, and the association of a knowledge container with a node of the standard taxonomy indicates that the content of the knowledge container concerns the topic represented by the node (see column 9, lines 53-57, Agrawal).

6. Regarding Claim 7, Agrawal discloses a knowledge map representation wherein the at least one entity is a person, place, organization, product, family of products, or a customer segment (see column 9, lines 58-64, Agrawal).

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7. Regarding Claim 8, Agrawal discloses a knowledge map representation wherein a taxonomic distance function is associated with each pair of nodes of taxonomy and is a function of the graphical representation of the taxonomy (see column 9, lines 54-57, Agrawal).

8. Regarding Claim 9, Agrawal discloses a knowledge map representation wherein each pair of nodes includes a parent node and a child node, and wherein the taxonomic distance function for the pair of nodes in the direction from the parent node to the child node is different than for the direction from the child node to the parent node (see column 9, lines 20-29, Agrawal).

9. Regarding Claim 10, Agrawal discloses a knowledge map representation wherein the taxonomic distance function for each pair of nodes of a taxonomy at least partially depends on how deep in the taxonomy are the pair of nodes (see column 6, lines 20-25, Agrawal).

10. Regarding Claim 11, The knowledge map representation of wherein the taxonomic distance function includes parameters incorporated manually by a human user, whereby the taxonomic distance function accounts for human knowledge about a semantic distance between concept nodes in the taxonomy (see column 6, lines 20-25, Agrawal).

11. Regarding Claim 12, Agrawal discloses a knowledge map representation wherein the manually incorporated parameters are represented in an editable table that facilitates computing the taxonomic distance function for a particular pair of nodes (see column 8, lines 57-65, Agrawal).

12. Regarding Claim 13, Agrawal discloses a knowledge map representation wherein the taxonomic distance function for a pair of nodes of a taxonomy at least partially depends on that taxonomy (see column 9, lines 20-29, Agrawal)

13. Regarding Claim 14, Agrawal discloses a knowledge map representation wherein the knowledge map includes a plurality of knowledge map regions, wherein each knowledge map

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region is a group of nodes collectively representing a coherent sub domain of knowledge (see column 10, lines 24-37 or 38-46, Agrawal).

14. Regarding Claim 15, Agrawal discloses a knowledge map representation wherein all the nodes in a particular knowledge map region are in the same taxonomy (see column 10, lines 47-52, Agrawal).

16. Regarding Claim 16, Agrawal discloses a knowledge map representation wherein:

taxonomic distance is a function of the graphical representation into which the taxonomy is organized (see column 10, lines 52-58, Agrawal);

the knowledge map region is centered about a particular central node (see Fig. 2, step 22, column 9, lines 58-67, Agrawal);

the nodes that are members of the region are those nodes having the least taxonomic distance from the particular central node (see Fig. 2, steps 24, 26, 28, Agrawal).

17. Regarding Claims 17, and 18, Agrawal discloses a knowledge map representation wherein:

knowledge containers are associated with at least some of the nodes (see Fig. 2, step 24, column 10, lines 12-22, Agrawal);

the nodes that are a member of the region have a similarity of vocabulary in the content of knowledge containers associated with the nodes (see column 10, lines 59-67, Agrawal).

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*Points of Contact*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to: Sana Al-Hashemi whose telephone number is (703) 305-4881. The examiner can normally be reached on Monday - Friday from 8:00 AM to 4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached on (703) 308-1436. Any response to this office action should be mailed to: The Commissioner of Patents and Trademarks, Washington, D.C. 20231. Or telefax at phone number (703) 746-9098. For formal or draft communications, please label "PROPOSED" or "DRAFT". Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, 6<sup>th</sup> Floor Receptionist, Arlington, Virginia. 22202.

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October 28, 2002

  
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